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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,527	10/17/2003	Maarten Menzo Wentink	088245-2502	7957
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FOLEY & LARDNER LLP 150 EAST GILMAN STREET P.O. BOX 1497 MADISON, WI 53701-1497			EXAMINER ANDREWS, LEON T	
			ART UNIT 2462	PAPER NUMBER
			MAIL DATE 10/13/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/688,527

Applicant(s)

WENTINK, MAARTEN MENZO

Examiner

LEON ANDREWS

Art Unit

2462

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

RCE

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 1, 2010 has been entered.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

2. Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 38-53 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent or can be broadly interpreted as covering both non-transitory and transitory medium. *See* MPEP 2111.01.

When the broadest reasonable interpretation of a claim covers a signal *per se*, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. See *In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 USC § 101*, Aug. 24, 2009; p. 2.

A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be **amended** to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 USC § 101 by adding the limitation "**non-transitory**" to the claim.

Claim Rejections - 35 USC § 112 – First Paragraph

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 38-53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 38-53 recited 'article of manufacture including a computer-readable medium'.

Nowhere in the original specification recites this newly added limitation.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-53 are being rejected under 35 U.S.C. 103(a) as being unpatentable by the Admitted Prior Art in the Background of the application (Pub. No.: US 2004/0136339 A1) in view of Awater et al. (Patent No.: US 7,046,649 B2).

Regarding Claims 1, 20, 24 and 38, Admitted Prior Art discloses a device (Fig. 1, stations 101, 102-1, 102-2, ¶ [0003], page 1, line 3), method (method for transmitting using modulation scheme, ¶ [0014], page 1, lines 1-4) and article of manufacture including a computer-readable medium having instructions stored thereon comprising:

a memory comprising a computer-readable program: and

a processor operably coupled to the memory and configured to execute the computer-readable program to cause the device to
determining at a first device (Fig. 1, 101, legacy station, ¶ [0011], page 1, lines 3-4) a power save status (enhanced station transmits frame detectable by the legacy station (enabling the legacy station to determine the power save status), ¶ [0015], page 1, lines 2-5) of a second device (Fig. 1, 102-2, enhanced station, ¶ [0011], page 1, lines 1-3); and

responsive to a determination that the second device is not in a power save state (enhanced station transmits frame detectable by the legacy station, ¶ [0015], page 1, lines 2-5),

(i) enabling transmission protection at the first device (enhanced station transmits frame detectable by the legacy station in accordance with transmission protection, ¶ [0015], page 1, lines 1-5); and

(ii) transmitting, from the first device, a message requesting that a third device enable transmission protection (frame detectable by the legacy station with mechanism notifying the enhanced stations (Fig. 1, 102-1) to use transmission protection, ¶¶ [0015], [0017], page 1, lines 4-5, 1-3).

Admitted Prior Art fails to disclose computer-readable medium, memory and processor coupled to the memory. .

But, Atwater et al. discloses a computer, column 4, line 3, Fig. 6, DMA 610 and CPU 622 coupled to memory.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3.

Regarding Claim 2, Admitted Prior Art discloses the method of claim 1 wherein determining the power save status of the second device (mechanism notifying the enhanced stations (Fig. 1, 102-2) to use transmission protection (power save), ¶ [0017], page 1, lines 1-3) comprises:

transmitting one of a Request-to-Send frame (Request-to-Send frame for transmission of frames using the second modulation scheme, ¶ [0016], page 1, lines 4-7), a Data frame, and a Null frame to the second device; and

receiving one of an Acknowledgement frame and a Clear-to-Send frame (Clear-to-Send frame for transmission of frames using the second modulation scheme, ¶ [0016], page 1, lines 4-7) from the second device.

Regarding Claims 3, 21 and 39, Admitted Prior Art discloses the device, method and article of manufacture wherein transmitting the message requesting that the third device enable transmission protection (frame detectable by the legacy station with mechanism notifying the enhanced stations (Fig. 1, 102-1, 102-2) to use transmission protection, ¶¶ [0015], [0017], page 1, lines 4-5, 1-3) comprises broadcasting a management frame (frame and a duration field for transmitting of frames using the second modulation scheme, ¶ [0016], page 1, lines 1-5).

Regarding Claims 4, 11, 22, 29, 40 and 47, Admitted Prior Art discloses the device, method and article of manufacture wherein the management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

Admitted Prior Art fails to disclose Beacon frame and a Probe-Response frame with protection status active.

But, Atwater et al. discloses Beacon frames sent at a regular interval by an AP, column 2, lines 5-6, and Probe Response frames sent by AP, column 2, lines 9-10.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the Beacon frames to allow STA to monitor and Probe Response frames to allow STA to actively scan AP on a channel, column 2, lines 5-12..

Regarding Claims 5, 7, 23, 25, 41 and 43, Admitted Prior Art discloses the device, method and article of manufacture wherein the second device is configured to communicate in accordance with a first modulation scheme (Fig. 1, 202-2, first modulation scheme, ¶¶ [0007], [0008], page 1, lines 1,1), and the first and third devices are configured to communicate in accordance with the first modulation scheme and a second modulation scheme (Fig. 1, 101, 202-1, first modulation scheme and second modulation scheme, ¶¶¶ [0005], [0006], [0007], [0009], page 1, lines 1, 1, 1, 1).

Regarding Claims 6 and 42, Admitted Prior Art discloses a method and article of manufacture including a computer-readable medium having instructions stored thereon comprising:

receiving, at a first device, a first frame from a second device (enhanced station transmits frame detectable by the legacy station, ¶ [0015], page 1, lines 2-5); and

in response to receiving the first frame from the second device (enhanced station transmits frame detectable by the legacy station, ¶ [0015], page 1, lines 2-5), (i) enabling transmission protection at the first device (enhanced station transmits frame detectable by the legacy station in accordance with transmission protection, ¶ [0015], page 1, lines 1-5); and (ii) broadcasting from the first device a message requesting that a third device enable transmission protection (frame detectable by the legacy station with mechanism notifying the enhanced stations (Fig. 1, 102-1, 102-2) to use transmission protection, ¶¶ [0015], [0017], page 1, lines 4-5, 1-3).

Admitted Prior Art fails to disclose computer-readable medium.

But, Atwater et al. discloses a computer, column 4, line 3.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3.

Regarding Claims 8, 26 and 44, Admitted Prior Art discloses a device, method and article of manufacture including a computer-readable medium having instructions stored thereon comprising:

a memory (Fig. 6, DMA 610) comprising a computer-readable program; and

a processor (Fig. 6, CPU 622) operably coupled to the memory and configured to execute the computer- readable program to cause the device to

transmitting, from a first device, a first message requesting that a second device enable transmission protection (mechanism notifying the enhanced station to use transmission protection, ¶

[0017], page 1, lines 1-3) and a second message requesting that the second device disable transmission protection (mechanism notifying the enhanced station not to use transmission protection, ¶ [0017], page 1, lines 1-3), wherein the first message and the second message are continuously transmitted in an alternating pattern (mechanism has the capability to activate and deactivate transmission protection, ¶ [0017], page 1, lines 4-5), and wherein a time period separates the transmission of the first message and the transmission of the second message (mechanism signaling whether or not protection must be used, ¶ [0017], page 1, lines 4-7); and in response to receiving a message from a third device at the first device, adjusting, the time period separating the transmission of the first message and the second message (duration field with the length of time for transmission of frames using the second modulation scheme, ¶ [0017], page 1, lines 1-5).

Admitted Prior Art fails to disclose computer-readable medium.

But, Atwater et al. discloses a computer, column 4, line 3.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3.

Regarding Claims 9, 10, 27-28, 45 and 46, Admitted Prior Art discloses the device, method and article of manufacture wherein, if the most recent message sent from the first device to the second device is the second/first message, adjusting the time period comprises reducing/increasing the amount of time until transmission of the first/second message (duration in the frame with the legacy

terminals to cover the length of time for transmission of frames using the modulation scheme, ¶ [0017], page 1, lines 1-5).

Regarding Claims 12, 30 and 48, Admitted Prior Art discloses the device, method and article of manufacture, wherein the message received from the third device is a legacy modulation frame (Fig. 1, 102-1 using first modulation scheme, ¶¶ [0007], [0009], page 1, lines 1-2, 1).

Regarding Claims 13 and 31, Admitted Prior Art discloses the device and method, wherein the first device is an access point (Fig. 1, 101).

Regarding Claims 14, 32 and 49, Admitted Prior Art discloses the device, method and article of manufacture, wherein the third device is configured to communicate in accordance with a first modulation scheme (Fig. 1 102-1 using first modulation scheme, ¶¶ [0007], [0008], page 1, lines 1-2, 1), and the device and second device are configured to communicate in accordance with the first modulation scheme and a second modulation scheme (Fig. 1, 101, 102-2, using first modulation scheme and second modulation scheme, ¶¶¶ [0005], [0006], [0007], [0009], page 1, lines 1, 1, 1-2, 1).

Regarding Claims 15, 33 and 35, Admitted Prior Art discloses the device and method, wherein the first/second modulation scheme (Fig. 1) is based on one of Barker modulation and Complementary Code Keying modulation; and wherein the first/second modulation scheme (Fig. 1) is based on Orthogonal Frequency Division Multiplexing modulation.

Admitted Prior Art fails to disclose Complementary Code Keying modulation and Orthogonal Frequency Division Multiplexing modulation.

But, Atwater et al. discloses CCK, Complementary Code Keying, column 1, lines 43-44, and OFDM, Orthogonal Frequency Division Multiplexing, column 1, lines 47-48.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the stations to communicate to the access points, column 1, lines 28-32.

Regarding Claims 16, 34 and 50, Admitted Prior Art discloses a device, method and article of manufacture including a computer-readable medium having instructions stored thereon comprising:

a memory (Fig. 6, DMA 610) comprising a computer-readable program; and
a processor (Fig. 6, CPU 622) operably coupled to the memory and configured to execute the computer- readable program to cause the device to

transmitting from a first device (Fig. 1, 101) a first frame (enhanced station transmits frame detectable by the legacy station in accordance with transmission protection, ¶ [0015], page 1, lines 1-5); and comprising a duration field value (duration field in the frame contains a value, ¶ [0016], page 1, line 1) to a second device (Fig. 1, 102-2) via a shared-communications channel (shared communications channel, ¶ [0003], page 1, lines 4-5) in a wireless local area network (Fig. 1, wireless local area network, ¶ [0003], page 1, lines 1-2) in accordance with a first modulation scheme (Fig. 1, first modulation scheme, ¶ [0006], page 1, line 1); and

receiving at the first device a second frame (frame transmitted by enhanced station, ¶ [0015], page 1, line 2) from a third device (Fig. 1, 102-1) via the shared-communications channel in

accordance with a second modulation scheme (frame transmitted by enhanced station using the second modulation scheme, ¶ [0015], page 1, lines 2-3) during a time interval (length of time for transmission of frame using the second modulation scheme, ¶ [0016], page 1, lines 4-5) defined by the value;

wherein the first modulation scheme (Fig. 1, first modulation scheme, ¶ [0006], page 1, line 1) is undetectable to the third device (Fig. 1, 102-1); and

wherein the first modulation scheme (Fig. 1, first modulation scheme, ¶ [0006], page 1, line 1) and the second modulation scheme (Fig. 1, second modulation scheme, ¶ [0009], page 1, line 1) are different from each other.

Admitted Prior Art fails to disclose computer-readable medium.

But, Atwater et al. discloses a computer, column 4, line 3.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3.

Regarding Claims 17 and 51, Admitted Prior Art discloses the method and article of manufacture,

wherein the first modulation scheme (Fig. 1) is based on Orthogonal Frequency Division Multiplexing modulation; and

wherein the second modulation scheme (Fig. 1) is based on one of Barker modulation and Complementary Code Keying modulation.

Admitted Prior Art fails to disclose Complementary Code Keying modulation and Orthogonal Frequency Division Multiplexing modulation.

But, Atwater et al. discloses CCK, Complementary Code Keying, column 1, lines 43-44, and OFDM, Orthogonal Frequency Division Multiplexing, column 1, lines 47-48.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the stations to communicate to the access points, column 1, lines 28-32.

Regarding Claims 18, 36 and 52, Admitted Prior Art discloses the device and method and article of manufacture, wherein the transmitting is one of (i) periodic and (ii) sporadic.

Admitted Prior Art fails to disclose transmission is periodic.

But, Atwater et al. discloses periodic transmissions, claim 29, column 15, line 40.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the first system not to transmit when the second system is receiving, claim 29, column 15, line 42-44.

Regarding Claims 19, 37 and 53, Admitted Prior Art discloses the device, method and article of manufacture, wherein the first frame further comprises instructions to refrain from transmitting frames for a time interval.

Admitted Prior Art fails to disclose refrain from transmitting for a time interval.

But, Atwater et al. discloses Bluetooth transceiver is deactivated (for a time interval) by the interoperability device whenever the IEEE 802.11 transceiver is activated and vice versa, column 6, lines 34-37.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the decision to be made as which mode of operation to switch to or activate, column 6, line 38-39.

Response to Arguments

5. Applicant's arguments filed July 1, 2010 have been considered but are moot in view of the new ground(s) of rejection as necessitated by the new and amendment to the claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Andrews whose telephone number is (571) 270-1801. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao S. Secma can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system,

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contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LA/la

October 7, 2010

/Kevin C. Harper/

Primary Examiner, Art Unit 2462